

WEST Search History

DATE: Wednesday, January 29, 2003

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
L12	chlamydia and L2	20	L12
L11	papilloma and L2	29	L11
L10	Treponenma and L2	0	L10
L9	Gonoccal and L2	0	L9
L8	HSV and L2	31	L8
L7	L3	38	L7
L6	L5	17	L6
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
L5	HIV and L4	124	L5
L4	immunogen and L3	131	L4
L3	congenital and L2	162	L3
L2	quadriiceps and injection	471	L2
L1	quadriiceps adj injection	0	L1

END OF SEARCH HISTORY

```
=> " sextial transmitted diseaase"
      0 "SEXTIAL"
      30795 "TRANSMITTED"
      1 "DISEAASE"
L1      0 " SEXTIAL TRANSMITTED DISEAASE"
          ("SEXTIAL" (W) "TRANSMITTED" (W) "DISEAASE")
```

```
=> mucosal (w) immunity
      29992 MUCOSAL
      5 MUCOSALS
      29994 MUCOSAL
          (MUCOSAL OR MUCOSALS)
      61201 IMMUNITY
      93 IMMUNITIES
      61230 IMMUNITY
          (IMMUNITY OR IMMUNITIES)
L2      921 MUCOSAL (W) IMMUNITY
```

```
=> systamic (w) immunity
      0 SYSTAMIC
      61201 IMMUNITY
      93 IMMUNITIES
      61230 IMMUNITY
          (IMMUNITY OR IMMUNITIES)
L3      0 SYSTAMIC (W) IMMUNITY
```

```
=> humoral (w) immuneresponse
      19192 HUMORAL
      5 IMMUNERESPONSE
L4      0 HUMORAL (W) IMMUNERESPONSE
```

```
=> "humoral immune response"
      19192 "HUMORAL"
      144306 "IMMUNE"
      7 "IMMUNES"
      144308 "IMMUNE"
          ("IMMUNE" OR "IMMUNES")
      1341951 "RESPONSE"
      260418 "RESPONSES"
      1460508 "RESPONSE"
          ("RESPONSE" OR "RESPONSES")
L5      3791 "HUMORAL IMMUNE RESPONSE"
          ("HUMORAL" (W) "IMMUNE" (W) "RESPONSE")
```

```
=> L2 and L5
L6      25 L2 AND L5
```

```
=> muscular (w) injection
      20640 MUSCULAR
      406750 INJECTION
      92362 INJECTIONS
      463466 INJECTION
          (INJECTION OR INJECTIONS)
L7      83 MUSCULAR (W) INJECTION
```

```
=> L6 and L7
L8      0 L6 AND L7
```

=> DIS L6 1- IBIB ABS

YOU HAVE REQUESTED DATA FROM 25 ANSWERS - CONTINUE? Y/(N):Y
THE ESTIMATED COST FOR THIS REQUEST IS 60.38 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L6 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:926602 CAPLUS

DOCUMENT NUMBER: 138:13473

TITLE: GM-CSF transgene-based adjuvant allows the establishment of protective **mucosal immunity** following vaccination with inactivated Chlamydia trachomatis

AUTHOR(S): Lu, Hang; Xing, Zhou; Brunham, Robert C.

CORPORATE SOURCE: British Columbia Center for Disease Control, University of British Columbia, Vancouver, BC, Can.

SOURCE: Journal of Immunology (2002), 169(11), 6324-6331
CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER: American Association of Immunologists

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Cellular and **humoral immune responses**

induced following murine Chlamydia trachomatis infection confer almost sterile protection against homologous reinfection. On the other hand, immunization with inactivated organism induces little protective immunity in this model system. The underlying mechanism(s) that detcs. such divergent outcome remains unclear, but elucidating the mechanism will probably be important for chlamydial vaccine development. One of the distinct differences between the two forms of immunization is that chlamydia replication in epithelial cells causes the secretion of a variety of proinflammatory cytokines and chemokines, such as GM-CSF, that may mobilize and mature dendritic cells and thereby enhance the induction of protective immunity. Using a murine model of C. trachomatis mouse pneumonitis lung infection and intrapulmonary adenoviral GM-CSF transfection, we demonstrate that the expression of GM-CSF in the airway compartment significantly enhanced systemic Th1 cellular and local IgA immune responses following immunization with inactivated organisms. Importantly, immunized mice had significantly reduced growth of chlamydia and exhibited less severe pulmonary inflammation following challenge infection. The site of GM-CSF transfection proved important, since mice immunized with inactivated organisms after GM-CSF gene transfer by the i.p. route exhibited little protection against pulmonary challenge, although i.p. immunization generated significant levels of systemic Th1 immune responses. The obvious difference between i.p. and intrapulmonary immunization was the absence of lung IgA responses following i.p. vaccination. In aggregate, the findings demonstrate that the local cytokine environment is crit. to the induction of protective immunity following chlamydial vaccination and that GM-CSF may be a useful adjuvant for a chlamydial vaccine.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:547693 CAPLUS

DOCUMENT NUMBER: 138:37726

TITLE: Helicobacter pylori-specific immunoglobulin synthesis in gnotobiotic piglets: evidence for the induction of **mucosal immunity** in the stomach

AUTHOR(S): Krakowka, Steven; Eaton, K. A.

CORPORATE SOURCE: College of Veterinary Medicine, Department of
Veterinary Biosciences, The Ohio State University,
Columbus, OH, 43210, USA
SOURCE: Veterinary Immunology and Immunopathology (2002),
88(3-4), 173-182
CODEN: VIIMDS; ISSN: 0165-2427
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Short term tissue biopsy cultures and paired, sera, bile and gastric and
intestinal contents from Helicobacter pylori-infected gnotobiotic piglets
were tested for the synthesis of H. pylori-specific Ig isotype prodn. by
antigen-specific ELISA from post-infection days (PIDs) 2-28. Serum
antibody levels in all three Ig isotypes were elevated from baseline
values by PID 14, serum IgM levels reached peak levels on PID 14 and by
PID 28 bile was strongly pos. for IgA and IgG. Intestinal, but not
gastric contents from infected piglets, contained IgA-specific antibody
from PID 14 onward. Gastric mucosal epithelia adjacent to areas of
inflammation in infected but not uninfected control piglets produced
readily detectable amts. of porcine secretory component (SC); IgA-pos.
plasma cells were identified in gastric submucosa and lamina propria in
these areas. Culture fluid supernatants, collected from explanted

gastric

cardia and antra and intestinal ilea of H. pylori-infected piglets had
trace amts. of IgA as early as PID 2 in some animals, and strong IgA
reactivity in all by PID 28. Supernatants also contained H.
pylori-specific IgG by PID 14. A strong gastric lymph node IgA response
contrasted with moderate IgA prodn. in mesenteric lymph nodes and spleen.
Mucosal biopsy prodn. of H. pylori-specific IgG was more evenly
distributed throughout the lymphoid system. These data support the
contention that the Ig response to H. pylori is initiated within the
gastric compartment and matures over time to a generalized IgA-dominated
mucosal and IgG-dominated nonmucosal **humoral immune
response.**

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR
THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L6 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:440655 CAPLUS

DOCUMENT NUMBER: 137:383382

TITLE: Immune responses to viruses

AUTHOR(S): Yewdell, Jonathan W.; Bennink, Jack R.

CORPORATE SOURCE: Laboratory of Viral Diseases, National Institute of
Allergy and Infectious Diseases, Bethesda, MD,
20892-0440, USA

SOURCE: Clinical Virology (2nd Edition) (2002), 273-309.
Editor(s): Richman, Douglas D.; Whitley, Richard J.;
Hayden, Frederick G. ASM Press: Herndon, Va.
CODEN: 69CSD2; ISBN: 1-55581-226-0

DOCUMENT TYPE: Conference; General Review

LANGUAGE: English

AB A review describes the mechanisms involved in the typical immune response
to a virus. It presents an overview of the immune system, and discusses
the innate and **mucosal immunity**, specific effector
mechanisms, pediatric immunity to viruses, viral interference with host
immunity, and immunopathol.

REFERENCE COUNT: 261 THERE ARE 261 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L6 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:303042 CAPLUS

DOCUMENT NUMBER: 137:277421

TITLE: The induction of systemic and **mucosal immunity** to protein vaccines delivered through skin sites exposed to UVB

AUTHOR(S): Enioutina, Elena Y.; Visic, Dino M.; Daynes, Raymond A.

CORPORATE SOURCE: Department of Pathology, University of Utah, Salt Lake

SOURCE: City, UT, 84132-2501, USA
Vaccine (2002), 20(16), 2116-2130

CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB It has been reported that common **mucosal immunity** can be efficiently induced in mice following immunization through the skin with vaccine formulations contg. either the active form of vitamin D, or chem. agents capable of locally enhancing cAMP levels. Herein, we report that exposure of skin to UV radiation B (UVB) can be employed as a means to alter systemic **humoral immune responses** and to promote the induction of **mucosal immunity** to protein antigens delivered into UVB-exposed skin sites. Our data indicates that the skin, as a vaccination site, can be manipulated to allow efficient induction of common mucosal and systemic immune responses.

REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L6 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:173508 CAPLUS

DOCUMENT NUMBER: 136:323630

TITLE: Chimeric Recombinant Hepatitis E Virus-like Particles as an Oral Vaccine Vehicle Presenting Foreign

Epitopes

AUTHOR(S): Niikura, Masahiro; Takamura, Shiki; Kim, Gisen; Kawai,

Satoru; Saijo, Masayuki; Morikawa, Shigeru; Kurane, Ichiro; Li, Tian-Cheng; Takeda, Naokazu; Yasutomi, Yasuhiro

CORPORATE SOURCE: Department of Virology 1, National Institute of Infectious Diseases, Musashimurayama, Tokyo, Japan

SOURCE: Virology (2002), 293(2), 273-280

CODEN: VIRLAX; ISSN: 0042-6822

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Many viral and bacterial pathogens establish infections through mucosal surfaces in their initial stage. However, only a few nonreplicating

mols. successfully induce strong mucosal immune reaction without the addn. of adjuvants by oral administration. To overcome this difficulty, the authors investigated whether hepatitis E virus-like particles (HEV-VLPs) could be utilized as a carrier mol. for foreign antigenic epitopes and to stimulate **mucosal immunity** without the need for

adjuvants. To accomplish this goal, the authors incorporated a B cell epitope tag, consisting of 11 amino acids at the C-terminal of HEV-VLP. The chimeric VLP showed morphol. similar to that of the mature HEV virion and VLP. The inserted epitope was reactive with a specific monoclonal antibody in the VLP form, suggesting that it was exposed on the surface of the VLP. After oral administration without adjuvant, this chimeric HEV induced significant levels of specific IgG and IgA to both the inserted epitope and HEV-VLP in intestinal secretions. These **humoral immune responses** were obsd. as early as 2 wk after the first immunization. These results suggest the potential of HEV-VLP as a mucosal vaccine carrier vehicle for the presentation of antigenic epitopes

through oral administration. (c) 2002 Academic Press.
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:884276 CAPLUS
DOCUMENT NUMBER: 137:31745
TITLE: CpG DNA functions as an effective adjuvant for the induction of immune responses in aged mice
AUTHOR(S): Manning, B. M.; Enioutina, E. Y.; Visic, D. M.; Knudson, A. D.; Daynes, R. A.
CORPORATE SOURCE: Department of Pathology, University of Utah, Salt Lake City, UT, 84132, USA
SOURCE: Experimental Gerontology (2001), 37(1), 107-126
CODEN: EXGEAB; ISSN: 0531-5565
PUBLISHER: Elsevier Science Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The present studies demonstrate that the immunization of aged mice with diphtheria toxoid in formulations contg. unmethylated immunostimulatory CpG motifs, promotes the successful development of immune responses that are qual. and quant. comparable to those induced in young animals vaccinated in a similar manner. Aged mice given vaccines contg. CpG oligodeoxynucleotides (ODNs) expressed primary and secondary systemic **humoral immune responses** having isotype profiles consistent with an enhancement in Th1 type immunity. The ability

to generate common **mucosal immunity** was also restored in aged animals given CpG ODN-contg. vaccines. Dendritic cells (DCs)

were detd. to represent one of the cellular targets of CpG ODN activities in aged mice since restoration of immune function was obsd. when DCs from aged donors were pulsed with antigen and CpG ODNs, prior to injection into

syngeneic young adult or aged recipients. Interestingly, antigen-pulsed DCs from young donors were fully capable of stimulating immune responses following their injection into syngeneic young adult or aged hosts, without a need for exposure to CpG ODNs. Although the mechanism(s) by which CpG DNA exerts its beneficial adjuvant effects on the aged immune system remains unclear, the findings suggest that the incorporation of

CpG ODNs into vaccine formulations provided to the aged could prove useful in the development of more effective vaccines for the elderly.

REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L6 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:841217 CAPLUS

DOCUMENT NUMBER: 136:400337

TITLE: Induction of **mucosal immunity** to mycobacterial heat shock protein (hsp) 65 by colonic inoculation of plasmid DNA encoding hsp65

AUTHOR(S): Orikasa, Hiroshi; Sato, Yukio; Yoshioka, Ryoji; Saito,

Ayako; Irisawa, Atsushi; Saka, Mitsuru; Miyata, Masayuki; Obara, Katsutoshi; Kusukawa, Reiji

CORPORATE SOURCE: Dep. Internal Med. II, Fukushima Med. Univ. Sch. Med.,

Japan

SOURCE: Nippon Shokakibyo Gakkai Zasshi (2001), 98(9), 1048-1059

CODEN: NIPAA4; ISSN: 0446-6586

PUBLISHER: Nippon Shokakibyo Gakkai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Mycobacterial heat shock protein (hsp) 65 has more than 50% sequence homol. with human hsp60 and immune responses against mycobacterial hsp65 may cross-react with human hsp60 and could cause autoimmune diseases including inflammatory bowel diseases (IBD). Since the colonic mucosa is a main inflammatory site in IBD, **mucosal immunity** to hsp65 may be more important for the mucosal inflammation than systemic immunity to hsp65. We inoculated plasmid DNA (pDNA) encoding mycobacterial hsp65 (pACB-hsp 65) into the colon of Wistar rats and evaluated the mucosal **humoral immune response** and the effect of these immune responses on the colonic mucosa. Four weeks after pDNA inoculation, significantly elevated titers of hsp65-specific IgA antibody were seen in fecal exts. of rats immunized intra-colonic mucosa with pACB-hsp65 (40.+-.9U/mL), whereas the fecal IgA antibody titers of rats inoculated intradermal with pACB-hsp65 did not arise (8.+-.5U/mL). Colonic inoculation of pACB-hsp65 induced systemic and mucosal immune responses to hsp65. However, macroscopic and histol. examns. of the colonic mucosa inoculated with pACB-hsp65 showed no evidence of mucosal damage. These results suggested that the **mucosal immunity** to hsp65 on the colonic mucosa may not play a crucial role in the induction of colonic mucosal inflammation as was seen in IBD.

L6 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:388098 CAPLUS

DOCUMENT NUMBER: 136:68274

TITLE: Host determinants in HIV infection and disease. Part 1: Cellular and **humoral immune responses**

AUTHOR(S): Hogan, Christine M.; Hammer, Scott M.

CORPORATE SOURCE: College of Physicians and Surgeons, Columbia University, New York, NY, USA

SOURCE: Annals of Internal Medicine (2001), 134(9, Pt. 1), 761-776

CODEN: AIMEAS; ISSN: 0003-4819

PUBLISHER: American College of Physicians-American Society of Internal Medicine

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. The course of HIV infection varies widely among individuals. Long-term nonprogressors or slow progressors may remain asymptomatic and have normal CD4 counts despite more than a decade of untreated HIV infection. In contrast, rapid progressors develop AIDS within 5 yr. In addn., some persons remain uninfected despite repeated exposure to HIV. Immunol. and genetic studies of long-term nonprogressors and exposed yet uninfected persons, as well as data from studies of primary HIV infection, have helped to elucidate the mechanisms by which some persons are protected from HIV acquisition or have slow rates of disease progression. This review (the first of two parts) describes what is currently known about host factors in HIV-1 infection. Studies for inclusion were identified by a systematic search of PubMed for English-language literature published from 1988 through June 2000. Abstrs. of presentations at major meetings convened in 2000 were also included if appropriate. Growing evidence suggests a crucial role of cytotoxic T cells and T-helper cells in controlling viremia, slowing disease progression, and perhaps preventing establishment of infection. Humoral and **mucosal immunity**, sol. inhibitory factors, the cytokine milieu, and concomitant infections also affect outcome. Genetic host factors, such as inheritance of mutant chemokine receptors or certain HLA types, affect susceptibility to infection and subsequent clin. course. The role of cellular and humoral immunity, **mucosal immunity**, and other local factors in detg. the course of HIV infection is discussed.

REFERENCE COUNT: 188 THERE ARE 188 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:27173 CAPLUS

DOCUMENT NUMBER: 134:157635

TITLE: The sympathetic nerve-an integrative interface between

AUTHOR(S): two supersystems: The brain and the immune system
Elenkov, Ilia J.; Wilder, Ronald L.; Chrousos, George P.; Vizi, E. Sylvester

CORPORATE SOURCE: Inflammatory Joint Diseases Section, Arthritis and Rheumatism Branch, National Institute of Arthritis and

Institutes Musculoskeletal and Skin Diseases, National of Health, Bethesda, MD, USA

SOURCE: Pharmacological Reviews (2000), 52(4), 595-638
CODEN: PAREAQ; ISSN: 0031-6997

PUBLISHER: American Society for Pharmacology and Experimental Therapeutics

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 445 refs. The brain and the immune system are the two major

adaptive systems of the body. During an immune response the brain and the

immune system "talk to each other" and this process is essential for maintaining homeostasis. Two major pathway systems are involved in this cross-talk: the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system (SNS). This overview focuses on the role of SNS in neuroimmune interactions, an area that has received much less

attention than the role of HPA axis. Evidence accumulated over the last 20 yr suggests that norepinephrine (NE) fulfills the criteria for neurotransmitter/neuromodulator in lymphoid organs. Thus, primary and secondary lymphoid organs receive extensive sympathetic/noradrenergic innervation. Under stimulation, NE is released from the sympathetic nerve terminals in these organs, and the target immune cells express adrenoreceptors. Through stimulation of these receptors, locally released NE, or circulating catecholamines such as epinephrine, affect lymphocyte traffic, circulation, and proliferation, and modulate cytokine prodn. and the functional activity of different lymphoid cells. Although there exists substantial sympathetic innervation in the bone marrow, and particularly in the thymus and mucosal tissues, our knowledge about the effect of the sympathetic neural input on hematopoiesis, thymocyte development, and **mucosal immunity** is extremely modest. In addn., recent evidence is discussed that NE and epinephrine, through stimulation of the .beta.2-adrenoreceptor-cAMP-protein kinase A pathway, inhibit the prodn. of type 1/proinflammatory cytokines, such as interleukin (IL-12), tumor necrosis factor-.alpha., and interferon-.gamma. by antigen-presenting cells and T helper (Th) 1 cells, whereas they stimulate the prodn. of type 2/anti-inflammatory cytokines such as IL-10 and transforming growth factor-.beta.. Through this mechanism, systemically, endogenous catecholamines may cause a selective suppression of Th1 responses and cellular immunity, and a Th2 shift toward dominance of humoral immunity. On the other hand, in certain local responses, and under certain conditions, catecholamines may actually boost regional immune responses, through induction of IL-1, tumor necrosis factor-.alpha., and primarily IL-8 prodn. Thus, the activation of SNS during an immune response might be aimed to localize the inflammatory response, through induction of neutrophil accumulation and stimulation of more specific **humoral immune responses**, although systemically it may suppress Th1 responses, and, thus protect the organism from the detrimental effects of proinflammatory cytokines and other products of activated macrophages. The above-mentioned immunomodulatory effects of catecholamines and the role of SNS are also discussed in the context of their clin. implication in certain infections, major injury and sepsis, autoimmunity, chronic pain and fatigue syndromes, and tumor growth. Finally, the pharmacol. manipulation of the sympathetic-immune interface is reviewed with focus on new therapeutic strategies using selective .alpha.2- and .beta.2-adrenoreceptor agonists and antagonists and inhibitors of phosphodiesterase type IV in the treatment of exptl. models of autoimmune diseases, fibromyalgia, and chronic fatigue syndrome.

REFERENCE COUNT: 445 THERE ARE 445 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L6 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:526195 CAPLUS

DOCUMENT NUMBER: 134:264770

TITLE: Safety and immunogenicity of adjuvanted and unadjuvanted subunit influenza vaccines administered intranasally to healthy adults

AUTHOR(S): Boyce, T. G.; Hsu, H. H.; Sannella, E. C.; Coleman-Dockery, S. D.; Baylis, E.; Zhu, Y.;

Culley, Barchfeld, G.; DiFrancesco, A.; Paranandi, M.;
B.; Neuzil, K. M.; Wright, P. F.
CORPORATE SOURCE: Dep. Pediatric Adolescent Med., Mayo Clinic, Mayo
Med.
SOURCE: Sch., Rochester, MN, USA
Vaccine (2000), 19(2-3), 217-226
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Antigen-specific **mucosal immunity** is thought to be
important for protection against influenza virus infection. Currently
licensed parenteral influenza vaccines stimulate the prodn. of serum
antibodies, but are poor inducers of **mucosal immunity**.
The adjuvant MF59 has been shown to enhance the **humoral**
immune response to parenteral influenza vaccine in
humans and the mucosal immune response to intranasally-administered
influenza vaccine in mice. We conducted an open-label safety study
followed by an observer-blind, randomized trial comparing the immune
response to intranasally-administered subunit influenza vaccine
adjuvanted
with MF59, unadjuvanted subunit influenza vaccine, and placebo. Adverse
reactions did not occur significantly more frequently in vaccines than
placebo recipients. Of 31 subjects receiving 2 doses of MF59-adjuvanted
influenza vaccine, 19 (61%), 8 (26%), and 11 (35%) developed a mucosal
IgA
response to influenza A/H1N1, A/H3N2, and B, resp. The percentage of
subjects with a serum antibody response was slightly lower. The immune
responses to adjuvanted vaccine were not significantly different from
those to unadjuvanted vaccine. Both vaccines gave more frequent
responses
than seen in placebo recipients, indicating the potential of intranasal
inactivated vaccines to stimulate local IgA responses.

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR
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RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L6 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:423192 CAPLUS
DOCUMENT NUMBER: 133:162791
TITLE: Gene gun-mediated DNA immunization primes development
of **mucosal immunity** against bovine
herpesvirus 1 in cattle
AUTHOR(S): Loehr, B. I.; Willson, P.; Babiuk, L. A.; Van Drunen
Littel-Van den Hurk, S.
CORPORATE SOURCE: Veterinary Infectious Disease Organization,
University
of Saskatchewan, Saskatoon, SK, S7N 5E3, Can.
SOURCE: Journal of Virology (2000), 74(13), 6077-6086
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Vaccination by a mucosal route is an excellent approach to the control of
mucosally acquired infections. Several reports on rodents suggest that
DNA vaccines can be used to achieve **mucosal immunity**
when applied to mucosal tissues. However, with the exception of one
study

with pigs and another with horses, there is no information on mucosal DNA immunization of the natural host. In this study, the potential of inducing **mucosal immunity** in cattle by immunization with a DNA vaccine was demonstrated. Cattle were immunized with a plasmid encoding bovine herpesvirus 1 (BHV-1) glycoprotein B, which was delivered with a gene gun either intradermally or intravulvomucosally. Intravulvomucosal DNA immunization induced strong cellular immune responses and primed **humoral immune responses**. This was evident after BHV-1 challenge when high levels of both IgG and IgA were detected. Intradermal delivery resulted in lower levels of immunity than mucosal immunization. To det. whether the differences between the immune responses induced by intravulvomucosal and intradermal immunizations might be due to the efficacy of antigen presentation, the distributions of antigen and Langerhans cells in the skin and mucosa were compared. After intravulvomucosal delivery, antigen was expressed early and throughout the mucosa, but after intradermal administration, antigen expression occurred later and superficially in the skin. Furthermore, Langerhans cells were widely distributed in the mucosal epithelium but found primarily in the basal layers of the epidermis of the skin. Collectively, these observations may account for the stronger immune response induced by mucosal administration.

REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 12 OF 25 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 2000:407549 CAPLUS
 DOCUMENT NUMBER: 134:41084
 TITLE: Enhancement of common **mucosal immunity** in aged mice following their supplementation with various antioxidants
 AUTHOR(S): Enioutina, Elena Y.; Visic, Dino M.; Daynes, Raymond A.
 CORPORATE SOURCE: Department of Pathology, University of Utah, Salt Lake City, UT, 84132, USA
 SOURCE: Vaccine (2000), 18(22), 2381-2393
 CODEN: VACCDE; ISSN: 0264-410X
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Common mucosal immune responses were depressed in aged mice that were orally immunized with Haemophilus influenzae type b oligosaccharide conjugated to Diphtheria CRM197 protein (Hib-DT) vaccine using cholera toxin as the mucosal adjuvant. Both common mucosal and systemic **humoral immune responses** were also depressed in aged mice that were s.c. immunized with vaccine formulations contg. Hib-DT plus 1.alpha.,25-dihydroxyvitamin D3 (1,25(OH)2D3). Dietary supplementation of aged mice with either the antioxidant vitamin E, or with known activators of the alpha isoform of the peroxisome proliferator activated receptor (PPAR-.alpha.) was capable of restoring their mucosal and systemic **humoral immune responses** to mature adult levels, by both the oral and s.c. routes of immunization. These data support a hypothesis that some aspects of immunosenescence are due to dysregulations in cellular functions, and are not due to any irreversible defects in cellular components of the immune system.

REFERENCE COUNT: 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L6 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 2000:395176 CAPLUS
 DOCUMENT NUMBER: 133:133988
 TITLE: CCR6 mediates dendritic cell localization, lymphocyte homeostasis, and immune responses in mucosal tissue
 AUTHOR(S): Cook, Donald N.; Prosser, Dina M.; Forster, Reinhold; Zhang, Jiwen; Kuklin, Nelly A.; Abbondanzo, Susan J.; Niu, Xiao-Da; Chen, Shu-Cheng; Manfra, Denise J.; Wiekowski, Maria T.; Sullivan, Lee M.; Smith, Sidney R.; Greenberg, Harry B.; Narula, Satwant K.; Lipp, Martin; Lira, Sergio A.
 CORPORATE SOURCE: Department of Immunology, Schering-Plough Research Institute, Kenilworth, NJ, 07033, USA
 SOURCE: Immunity (2000), 12(5), 495-503
 CODEN: IUNIEH; ISSN: 1074-7613
 PUBLISHER: Cell Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Chemokine-directed migration of leukocyte subsets may contribute to the qual. differences between systemic and **mucosal immunity**. Here, the authors demonstrate that in mice lacking the chemokine receptor CCR6, dendritic cells expressing CD11c and CD11b are absent from the subepithelial dome of Peyer's patches. These mice also have an impaired **humoral immune response** to orally administered antigen and to the enteropathic virus rotavirus. In addn., CCR6-/- mice have a 2-15-fold increase in cells of select T lymphocyte populations within the mucosa, including CD4+ and CD8+ .alpha..beta.TCR T cells. By contrast, systemic immune responses to s.c. antigens in CCR6-/- mice are normal. Thus, CCR6 is a mucosa-specific regulator of humoral immunity and lymphocyte homeostasis in the intestinal mucosa.
 REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L6 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 2000:263217 CAPLUS
 DOCUMENT NUMBER: 133:320778
 TITLE: Whole gut lavage fluid analysis: a minimally invasive method for study of **mucosal immunity** and inflammation
 AUTHOR(S): Ghosh, Subrata; Dachele, Anna; Drummond, Hazel E.; Hoque, Syed S.; Humphreys, Kenneth; Arnott, Ian D. R.
 CORPORATE SOURCE: Department of Gastroenterology, Western General Hospital, Edinburgh, UK
 SOURCE: Methods in Molecular Medicine (2000), 41(Celiac Disease), 257-277
 CODEN: MMMEFN
 PUBLISHER: Humana Press Inc.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The use of whole gut lavage fluid (WGLF) to study **mucosal immunity** and inflammation is described in detail. Both gut protein loss in mucosal inflammation and local mucosal secretion of cytokines and antibodies can be detected and studied by WGLF anal. This technique can easily be combined with colonoscopy or barium enema, but an

experienced nurse is usually required to monitor the patient. The information obtained can be used to exclude active inflammation as a cause of symptom in complex cases of inflammatory bowel disease or to exclude a gastrointestinal cause of blood loss. Use of this technique has shown the dissonance between systemic and mucosal humoral immune responses in celiac disease.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE
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L6 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:198416 CAPLUS

DOCUMENT NUMBER: 130:350907

TITLE: Intranasal delivery of recombinant parovirus-like particles elicits cytotoxic T-cell and neutralizing antibody responses

AUTHOR(S): Sedlik, C.; Dridi, A.; Deriaud, E.; Saron, M. F.; Rueda, P.; Sarraseca, J.; Casal, J. I.; Leclerc, C.

CORPORATE SOURCE: Unite de Biologie des Regulations Immunitaires, Institut Pasteur, Paris, 75724, Fr.

SOURCE: Journal of Virology (1999), 73(4), 2739-2744

CODEN: JOVIAM; ISSN: 0022-538X

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We previously demonstrated that chimeric porcine parvovirus-like particles

(PPV:VLP) carrying heterologous epitopes, when injected i.p. into mice without adjuvant, activate strong CD4+ and CD8+ T-cell responses specific for the foreign epitopes. In the present study, we investigated the immunogenicity of PPV:VLP carrying a CD8+ T-cell epitope from the lymphocytic choriomeningitis virus (LCMV) administered by mucosal routes. Mice immunized intranasally with recombinant PPV:VLP, in the absence of adjuvant, developed high levels of PPV-specific IgG and/or IgA in their serum, as well as in mucosal sites such as the bronchoalveolar and intestinal fluids. Antibodies in sera from mice immunized parenterally

or

intranasally with PPV:VLP were strongly neutralizing in vitro.

Intranasal

immunization with PPV:VLP carrying the LCMV CD8+ T-cell epitope also elicited a strong peptide-specific cytotoxic-T-cell (CTL) response. In contrast, mice orally immunized with recombinant PPV:VLP did not develop any antibody or CTL responses. We also showed that mice primed with PPV:VLP are still able to develop strong CTL responses after subsequent immunization with chimeric PPV:VLP carrying a foreign CD8+ T-cell

epitope.

These results highlight the attractive potential of PPV:VLP as a safe, nonreplicating antigen carrier to stimulate systemic and mucosal immunity after nasal administration.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L6 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:100005 CAPLUS

DOCUMENT NUMBER: 130:295290

TITLE: Antibody-Independent Protective **Mucosal Immunity** to Gastric Helicobacter Infection in Mice

AUTHOR(S): Blanchard, Thomas G.; Czinn, Steven J.; Redline, Raymond W.; Sigmund, Norma; Harriman, Gregory; Nedrud, John G.

CORPORATE SOURCE: Institute of Pathology, Case Western Reserve University, Cleveland, OH, USA

SOURCE: Cellular Immunology (1999), 191(1), 74-80
CODEN: CLIMB8; ISSN: 0008-8749

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Helicobacter pylori infection of the gastric mucosa can result in gastritis and peptic ulcer disease. Although vaccination can induce protective immunity in animal models of Helicobacter infection, the mechanism(s) of protective immunity has not been fully elucidated. This study was designed to det. whether **humoral immune responses** are required for protective Helicobacter immunity. IgA-deficient or Ig-deficient mice were orally immunized against Helicobacter felis and then challenged with live H. felis. Both groups were protected at levels comparable to that of wild-type mice. Addnl., inflammation was equiv. in extent and character between wild-type and antibody-deficient mice. Therefore antibody-independent mechanisms of immunity can protect mice against gastric Helicobacter infection. (c) 1999 Academic Press.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

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L6 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:340230 CAPLUS

DOCUMENT NUMBER: 129:121367

TITLE: Lipidation as a novel approach to mucosal immunization

AUTHOR(S): Tam, J. P.; Mora, A. L.; Rao, C.

CORPORATE SOURCE: Department of Microbiology and Immunology, Vanderbilt University, Nashville, TN, USA

SOURCE: Developments in Biological Standardization (1998), 92 (Modulation of the Immune Response to Vaccine Antigens), 109-116
CODEN: DVBSA3; ISSN: 0301-5149

PUBLISHER: S. Karger AG

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors describe the design and development of a novel peptide-based approach for mucosal immunization. The design contains an amplified peptide chain as multiple antigen peptide (MAP) with a cluster of lipids. Such a design would confer on lipidated MAP the ability to self-assemble in water, mimicking enveloped viral particles. The importance of lipidation for mucosal immunization was confirmed by oral immunization with lipidated MAP in phosphate-buffered saline (PBS), which induced mucosal and systemic immune responses at local and distant sites, including sera and vaginal IgG as well as secretory IgA in saliva, vaginal secretions and fecal matter. T- cell proliferative responses were found in spleen, Peyer's patches and genital lymph nodes. In addn., significant

splenic cytotoxic T-cell responses were also obsd. No significant immune responses were obsd. with non-lipidated MAPs by oral delivery in PBS. Furthermore, these responses were selectively enhanced by different regimens, systemic priming and microparticle delivery. These results demonstrate the effectiveness of lipidated MAP for mucosal immunization

to

evoke both systemic and mucosal immune responses without the use of carrier or extraneous adjuvant.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

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L6 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:89674 CAPLUS

DOCUMENT NUMBER: 128:132318

TITLE: Sensitized liposomes as an antigen delivery system for

the stimulation of **mucosal immunity**

AUTHOR(S): Velez, Carlos N.; Tonkonogy, Susan L.; Lichtman, Steven N.; Cho, Moo J.

CORPORATE SOURCE: Div. Pharmaceuticals, School Pharmacy, Univ. North Carolina, Chapel Hill, NC, 27599, USA

SOURCE: Journal of Drug Targeting (1997), 5(1), 15-24

CODEN: JDTAEH; ISSN: 1061-186X

PUBLISHER: Harwood Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB This study was designed to exploit the ability of Peyer's patch M cells to

recognize antigen-antibody complexes in the targeted delivery of a model antigen for the induction of **mucosal immunity**.

Sensitized liposomes consisted of an entrapped model antigen, ovalbumin (OVA), and coated with unrelated antigen-antibody complexes. Sensitized liposomes were administered intrajejunally to mice either with or without monophosphoryl lipid A (MLA). **Humoral immune**

responses were monitored in saliva, feces, serum, and bile. Mice which received sensitized liposomes showed up to 4-fold amts. of specific IgA in saliva, feces, and bile compared to controls. Transient increases in anti-OVA IgA and IgG were obsd. in serum. Formulations including MLA generated pos. anti-OVA IgG responses in both serum and bile. In sep. expts., cell proliferation studies were performed with Peyer's patch lymphocytes harvested from mice immunized with OVA in either std. or sensitized liposomes. Lymphocytes from test mice receiving only sensitized liposomes proliferated in the presence of OVA, but not an unrelated antigen. Taken together, these results support the potential application of antigen-antibody complexes in the stimulation of mucosal immune responses and that MLA may play an important role in overcoming

OVA

tolerogenicity.

L6 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:465187 CAPLUS

DOCUMENT NUMBER: 127:189606

TITLE: Enhanced mucosal and systemic immune responses to intestinal reovirus infection in

.beta.2-microglobulin-

deficient mice

AUTHOR(S): Major, Amy S.; Cuff, Christopher F.

CORPORATE SOURCE: Dep. Microbiol. Immunol., Robert C. Byrd Health Sci.

USA
SOURCE: Cent., West Virginia Univ., Morgantown, WV, 26506,
Journal of Virology (1997), 71(8), 5782-5789
CODEN: JOVIAM; ISSN: 0022-538X

PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Enteric infection of mice with respiratory enteric orphan virus
(reovirus)

type 1, strain Lang elicits both humoral and cellular immune responses. To investigate the role of CD8+, .alpha./.beta. T-cell receptor (TCR)+ T cells in **mucosal immunity** to an enteric pathogen, we examd. immune responses and viral clearance following enteric reovirus infection in C57BL/6, B6129F2, and .beta.2-microglobulin-deficient (.beta.2m-/-) mice. Anal. of Peyer's patch and lamina propria culture supernatants revealed a two- to threefold increase in levels of reovirus-specific IgA in .beta.2m-/- mice compared to normal controls. These data corresponded to a similar increase in the frequency of virus-specific IgA-producing cells in Peyer's patches and lamina propria and an increase in IgG-producing cells in spleens from .beta.2m-/- mice compared to controls. These increased **humoral immune responses** were not due to a difference in B-cell populations because cell counts and flow cytometric analyses showed that .beta.2m-/- and control mice had similar nos. and percentages of B cells in mucosal and systemic tissues. Anal. of cytokine message by reverse transcriptase-PCR 5 and 10 days after infection revealed no difference in message level for transforming growth factor beta, gamma interferon, interleukin-4, interleukin-5, or interleukin-6 for all mouse strains. Virus tissue titers detd. by plaque assay at 5 and 10 days after infection demonstrated that .beta.2m-/- mice cleared reovirus from the small intestines with the same efficiency as control mice. Collectively, these data suggest that CD8+, .alpha./.beta. TCR+ T cells may regulate mucosal and systemic **humoral immune responses** to oral infection with reovirus.

L6 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:215733 CAPLUS
DOCUMENT NUMBER: 124:258190

TITLE: In vivo treatment with anti-interleukin-13 antibodies significantly reduces the **humoral immune response** against an oral immunogen in mice

AUTHOR(S): Bost, K. L.; Holton, R. H.; Cain, T. Kincy; Clements, J. D.

CORPORATE SOURCE: Med. Cent., Tulane Univ., New Orleans, LA, USA
SOURCE: Immunology (1996), 87(4), 633-41
CODEN: IMMUAM; ISSN: 0019-2805

PUBLISHER: Blackwell
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Interleukin-13 (IL-13) is a cytokine that significantly enhances the proliferation and differentiation of B lymphocytes. We therefore evaluated its role in the formation of a **humoral immune response** in vivo. Upon oral immunization with the B subunit of Escherichia coli heat-labile enterotoxin (LT-B), rapid up-regulation of IL-13 mRNA expression in the mesenteric lymph nodes of LT-B intubated mice

occurred. This result suggested that IL-13 might be involved in the formation of a mucosal antibody response against LT-B if this cytokine was

in fact secreted. To test this possibility, the coding region for murine IL-13 was cloned into the pFLAG-1 expression vector. Recombinant murine IL-13 was purified from bacterial lysates and used as an immunogen to produce polyclonal anti-IL-13 antibodies. Groups of BALB/c mice treated in vivo with anti-IL-13 antibody 2 days before and on the day of oral immunization with LT-B had significantly reduced intestinal IgA and serum IgG and IgA anti-LT-B antibody responses when compared to mice treated with control antibody. Furthermore, groups of mice primed with LT-B and then treated with anti-IL-13 antibody prior to oral immunization with a second dose of LT-B also had significantly reduced intestinal IgA and serum IgG and IgA anti-LT-B antibody titers compared to control. In vitro LT-B restimulation expts. using splenic mononuclear leukocytes isolated from LT-B primed mice treated with anti-IL-13 antibody demonstrated decreased expression of IL-4 and IL-13 mRNA and decreased IL-4 secretion when compared to controls. Together these results demonstrate an important role for IL-13 in the formation of a **humoral immune response** at mucosal surfaces.

L6 ANSWER 21 OF 25 · CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:32066 CAPLUS

DOCUMENT NUMBER: 124:114803

TITLE: Specific secretory immune responses in the female genital tract following intranasal immunization with

a recombinant adenovirus expressing glycoprotein B of herpes simplex virus

AUTHOR(S): Gallichan, W. Scott; Rosenthal, Kenneth L.
CORPORATE SOURCE: Health Sciences Centre, McMaster University,
Hamilton,

ON, Can.

SOURCE: Vaccine (1995), 13(16), 1589-95

CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Previously, the authors demonstrated that intranasal (i.n.) but not i.p. immunization with a recombinant adenovirus vector expressing glycoprotein B (gB) of herpes simplex virus type 1 (HSV-1) induced mucosal immune responses and conveyed long-term protection to mice against an i.n. challenge with heterologous HSV-2. The authors now show that i.n. immunization of female mice with this same vector, AdgB8, provides secretory and serum-derived **humoral immune responses** in the genital tract. Intranasal immunization induced anti-HSVgB IgA and IgG in vaginal washes of mice, whereas i.p. immunization only induced IgG, which appeared to be serum-derived. Interestingly, intravaginal (ivag) immunization with AdgB8 resulted in little or no anti-HSVgB IgA and only low levels of specific IgG in

vaginal washes. All three routes of inoculation induced gB-specific serum IgG and

IgA; however, i.n. immunized mice demonstrated the highest level of serum anti-HSVgB IgA. Addnl., ivag boosting with AdgB8 did not significantly alter the serum or vaginal wash antibody responses in i.n. or i.p. immunized mice. The IgG to IgA ratios of gB-specific and total antibody titers in the serum and vaginal washes of i.n. immunized mice indicated that the IgA in the vaginal washes was likely to be secretory. Furthermore, the titers of anti-HSVgB IgA relative to total IgA were higher in vaginal washes than sera, suggesting that the gB-specific vaginal wash IgA present in i.n. immunized mice was locally produced.

L6 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:912520 CAPLUS

DOCUMENT NUMBER: 124:6669

TITLE: Development of mucosal **humoral**
immune responses in germ-free (GF)
mice

AUTHOR(S): Khroff, Khushroo E.; Cebra, John J.

CORPORATE SOURCE: Departmetn Biology, University Pennsylvania,
Philadelphia, PA, 19104-6018, USA

SOURCE: Advances in Experimental Medicine and Biology (1995),
371A(Advances in Mucosal Immunology, Part A), 441-6
CODEN: AEMBAP; ISSN: 0065-2598

PUBLISHER: Plenum

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors sought to derive antigen-specific germinal center reactions
in

Peyer patches leading to IgA commitment and memory B-cells and secretory
plasma cells. Also, the kinetics of the antibody response were detd.

L6 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:871747 CAPLUS

DOCUMENT NUMBER: 123:253999

TITLE: Mucosal model of immunization against human
immunodeficiency virus type 1 with a chimeric
influenza virus

AUTHOR(S): Muster, Thomas; Ferko, Boris; Klima, Annelies;
Purtscher, Martin; Trkola, Alexandra; Schulz, Petra;
Grassauer, Andreas; Engelhardt, Othmar G.;
Garcia-Sastre, Adolfo; et al.

CORPORATE SOURCE: Inst. Angewandte Mikrobiol., Univ. Bodenkultur,
Vienna, A-1190, Austria

SOURCE: Journal of Virology (1995), 69(11), 6678-86
CODEN: JOVIAM; ISSN: 0022-538X

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Previously, we constructed a chimeric influenza virus that expresses the
highly conserved amino acid sequence ELDKWA of gp41 of human
immunodeficiency virus type 1 (HIV-1). Antisera elicited in mice by
infection with this chimeric virus showed neutralizing activity against
distantly related HIV-1 isolates (T. Muster, et al., 1994). In the
present study, we demonstrated that intranasal immunizations with this
chimeric virus are also able to induce a **humoral immune**
response at the mucosal level. The immunized-mice-had
ELDKWA-specific IgA in respiratory, intestinal, and vaginal secretions.
Sustained levels of these secretory IgA were detectable for more than 1

yr

after immunization. The results show that influenza virus can be used to
efficiently induce secretory antibodies against antigens from foreign
pathogens. Since long-lasting mucosal immunity in the
genital and intestinal tracts might be essential for protective immunity
against HIV-1, influenza virus appears to be a promising vector for
HIV-1-derived immunogens.

L6 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:256765 CAPLUS

DOCUMENT NUMBER: 122:29553

TITLE: Systemic and **mucosal immunity**

protein induced by BCG vector expressing outer-surface
 A of *Borrelia burgdorferi*

AUTHOR(S): Langermann, Solomon; Palaszynski, Susan; Sadziene, Ariadna; Stover, C. Kendall; Koenig, Scott

CORPORATE SOURCE: MedImmune Inc., Gaithersburg, MD, 20878, USA

SOURCE: Nature (London) (1994), 372(6506), 552-5

CODEN: NATUAS; ISSN: 0028-0836

PUBLISHER: Macmillan Magazines

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The bacillus Calmette-Guerin (BCG) is a live attenuated strain of *Mycobacterium bovis* which offers potential advantages as a vector for mucosal delivery of antigens. Recombinant BCG elicits protective **humoral immune responses** to a variety of antigens. Furthermore, BCG binds specifically to microfold cells present in the epithelium overlying lymphoid follicles throughout the mucosal immune system. Here the authors show that a single intranasal vaccination with recombinant BCG expressing the outer surface protein A antigen from *B. burgdorferi* results in a prolonged (>1 yr) protective systemic IgG response and a highly sustained secretory IgA response which is disseminated throughout the mucosal immune system. Furthermore, intranasal immunization induces marked, organized lymphocyte accumulation in the proximal nasopharyngeal lymphoid tissue as well as at distal mucosal sites; the appearance and persistence of lymphoid aggregates correlates with the secretory immune responses. The intranasal immunization with recombinant BCG is a powerful method for inducing long-lasting secretory and systemic immune responses.

L6 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:189142 CAPLUS

DOCUMENT NUMBER: 120:189142

TITLE: Oral immunization with recombinant BCG induces cellular and **humoral immune responses** against the foreign antigen

AUTHOR(S): Lagranderie, M.; Murray, A.; Gicquel, B.; Leclerc, C.; Gheorghiu, M.

CORPORATE SOURCE: Lab. du BCG, Inst., Pasteur de Paris, Paris, 75724, Fr.

SOURCE: Vaccine (1993), 11(13), 1283-90

CODEN: VACCDE; ISSN: 0264-410X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB It has been shown recently that BCG can be used as a live recombinant vaccine to stimulate immune responses. Proliferative or cytotoxic T-cell responses against several viral proteins such as HIV Gag, Env or Nef were obtained after parenteral immunization with BCG expressing these proteins. Antibody responses were also obtained after immunization of mice with recombinant BCG strain which expressed lac Z under the control of a promoter sequence isolated from *Mycobacterium paratuberculosis*. The authors have used this recombinant vaccine in guinea-pigs to investigate the influence of various routes of immunization on the immunogenicity of foreign antigen expressed by recombinant BCG. Guinea-pigs were immunized by oral, respiratory or intradermal routes and proliferative responses, delayed-type hypersensitivity and antibody responses specific for .beta.-galactosidase were followed for 16 wk. Results demonstrated that

humoral and cellular immune responses specific for .beta.-galactosidase can be produced in all groups of guinea-pigs. However, the respiratory and esp. the oral route of administration induced higher local and systemic immune responses than the intradermal route of immunization. Moreover, the oral immunization of mice with this recombinant BCG induced IgA responses which could be detected in both sera and intestinal secretions. Therefore, this study demonstrates for the first time that oral immunization with recombinant BCG can induce strong cellular and **humoral immune responses.**

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nested terms that are not separated by a logical operator.
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      0 QAUDRICEPS
406750 INJECTION
 92362 INJECTIONS
463466 INJECTION
      (INJECTION OR INJECTIONS)
L9      0 QAUDRICEPS (W) INJECTION
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STN INTERNATIONAL LOGOFF AT 15:17:44 ON 29 JAN 2003
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